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In Negotiations with NSF

DOD Seeks Tighter Controls on Supercomputers

With the Pentagon's hardliners determined to put a security screen around supercomputers in American universities, the National Science Foundation has agreed to accept visa controls as the gatekeeping device for barring visiting Soviet-bloc researchers from the facilities it finances.

The two federal agencies, however, remain at odds over Defense's insistence on barring Soviet-bloc students enrolled at the universities from courses that utilize the supercomputers. Few such students are here now, but at the otherwise barren Geneva summit, President Reagan cheerfully proposed large-scale exchanges of Soviet and American students. NSF officials are fearful that government insistence on security restrictions for enrolled students will cause a blowup in academe. University officials have repeatedly proclaimed that they won't play policeman for the Pentagon.

Following months of discussions between the Foundation and the Pentagon, and periodic reports of a policy statement soon to come, the issue remains unresolved. The State Department is also involved in the negotiations, but, as usual, DOD's security zealots, led by Assistant Secretary Richard N. Perle, are calling the signals.

Visa controls as a general device for dealing with suspect foreign visitors have been grudgingly accepted in academe after years of wrangling between the Reagan Administration and organizations representing the major research universities. For the universities, the basic appeal of visa controls is that they leave the dirty work to the government, and permit the universities to keep their doors open to all visitors who show up.

Opposition to visa controls has also been some-

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Super Accelerator: DOE Head Says Decision Time is Here

The debut of Gramm-Rudman coincides with the advanced gestation of designs for the costliest basic research facility of all time—the Superconducting Super Collider (SSC). It's yearned for by particle physics but feared as a money gulper by many scientists in other fields and deficit-conscious Congressmen and Executive Branch officials. Sixty-miles around, priced at $6 billion, and an object of intense pork-barrel interest around the country, the SSC is moving toward a decision much faster than was originally expected, as Donald Herrington, Secretary of the Department of Energy, disclosed February 19 in testimony to the House Science and Technology Committee. Following are excerpts:

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Chairman Don Fuqua (D-Fla.). I understand that there's no specific funding for the Superconducting Super Collider (SSC), and that you're waiting for an April report from the Central Design Group prior to committing any FY '87 funds. How soon can we expect a commitment from DOE on the SSC?

Herrington. The thing I'd like to point out on the SSC—we are at a decision point . . . . To further fund any more studies or investigations into it, I think, would not be money well spent. What we as a country need to

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In Brief

The White House continues to insist that whatever else must be cut to meet Gramm-Rudman levels, the budget of the Strategic Defense Initiative Office (SDIO) is to remain untouched. Defense spending has been tagged for a 4.9 percent reduction in the current fiscal year, but with SDI protected, the cut works out to 5.6 percent for the Pentagon's non-Star Wars R&D.

Quoting an unnamed "DOD budget officer," the Congressional Research Service says that Defense will have to trim some $12 million from its university-support programs "as a result of protecting SDIO funding from sequestration." The report adds, however, that "it should be pointed out . . . that universities will probably receive about $140 million in funding form SDIO in fiscal year 1986, for a net increase resulting from SDIO of about $128 million."

For 5 successive years, Congress has thwarted the Administration's efforts to eliminate the Sea Grant Program, which began in 1968, and it's going to have do it again if the program is survive. While the annual rescues have kept the program alive, it has not prospered. A new study by the Congressional Research Service shows that federal Sea Grant funding reached a peak of $41.8 million in 1981; twice in the following 4 years it dropped to $35 million. Non-federal matching funds have remained around the 1981 level of $25 million.

The Perils of CEBAF: A Senator Takes a Hostage

After a strenuous regional competition, budget delays, and a major redesign, the big electron accelerator planned for Newport News, Va., seemed safe last month with the inclusion of $25 million of groundbreaking money in next year's parsimonious budget for the Department of Energy. But now it faces a new threat—as a hostage against the Administration's plans to cut two big projects in Louisiana, the Strategic Petroleum Reserve (SPR) and a dam and lock on the Red River.

The connection between these items and the Continuous Electron Beam Accelerator Facility (CEBAF) is not visible because it is non-existent. However, that was no impediment to Senator J. Bennett Johnston, Democrat of Louisiana, where DOE has stored some 500 million barrels of oil in underground caverns as a cushion against an import cutoff. With Gramm-Rudman pressures mounting, and oil in plentiful supply for the foreseeable future, the Administration has cancelled SPR oil purchases for next year and has cut out the Red River projects.

The decision was not to the liking of Johnston, the ranking Democrat on the Appropriations Subcommittee on Energy and Water Development; he's also ranking on the Energy and Natural Resources Committee, which accords him *ex officio* status as a member of all its subcommittees. Johnston is thus well-situated to make trouble for the Virginia project.

Furthermore, the management of high-energy physics is one of his pet interests, and he has the General Accounting Office looking into his suspicions that some of DOE's accelerator managers have been juggling accounts to proceed with construction and upgrades prior to Congressional approval. GAO sources tell SGR that their study is nearly completed and that it supports at least some of Johnston's notions.

It was at a hearing of the full Energy and Natural Resources Committee on February 18 that Johnston threatened to link the fates of the accelerator and the Louisiana projects. With DOE Secretary John Herrington in the witness chair to open the Department's annual hearing before the Committee, Johnston declared:

"If the Administration thinks for a minute you are going to start up a new, expensive project like the Continuous Beam Accelerator and stop the River River project and stop the Strategic Petroleum Reserve and give us a pittance of what we are entitled to . . . it is going to happen over my dead body."

Johnson stormed on, declaring that "from the standpoint of my state, this is an anti-Louisiana budget and an outrage, absolute outrage." Then, in an exchange with Herrington, the Senator brought out that CEBAF's construction was budgeted for $236 million, and annual operating costs were estimated at $40 million.

With those figures on the record, Johnston said, "Well, let me tell you, if we do not have money, if we take high national priorities like the Strategic Petroleum Reserve and put a moratorium on it, then we cannot afford to be starting new projects of dubious validity."

CEBAF, continued Johnston, a lawyer who was first elected to the Senate in 1972, "is not the end-all and the be-all of determinining the unified-force field or establishing the 'big bang' theory or filling in all the gaps of quarks and leptons. It does just a little bit, goes along and keeps the program going. Believe, me," he concluded, "we do not have the dollars to be doing that if we cannot continue projects we started with."

Senator John W. Warner (R-Va.), who helped land the accelerator for his state in competition against a midwest consortium, offered Herrington the opinion that CEBAF received "very fair consideration in your budget." But Warner said he was worried about the effects of Gramm-Rudman on the new project.

Herrington replied, "It is our intention to continue with CEBAF. I think it is up to Congress to pass the funds for it."

Can Johnston derail CEBAF if Louisiana doesn't get its goodies? With Gramm-Rudman turning all the rules of Capitol horsetrading topsy-turvy, the future on such matters is extremely murky.

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. . . "The Only Decision: Can We Afford $6 Billion?"

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do at this point is to decide whether we will move forward with approximately a six-billion-plus-dollar program. I don't think we're prepared to do that yet.

I don't want to give the impression that we think this is a bad idea. We like the idea of an SSC. It is strictly budget driven as to whether we can, with the best allocation of our funds, move with this project. The report will be important, but it doesn't appear to us, [for] good management, to put any more money in the budget when we are at this point, when we really don't get much in return for it.

Fuqua. So, you're not anticipating any funding for FY '87 construction?

Herrington. No, sir.

Fuqua. Then, that project, as it appears now, is on hold until budget constraints give some relief.

Herrington. I think that is a good characterization. The only thing I would add is, if the report comes back and more R&D is needed, we can reprogram. We are in that flexible position. We certainly don't want to give the impression that we're opposed to the project. On the other hand, we do not want to waste further funds at this time, until we make a decision.

Rep. Harris W. Fawell (R-Ill.). I get a rather pessimistic message here, that if it isn't moribund, it's getting close to that state . . . . You seem to be saying that if this design report comes in, unless there's some significant R&D to be done, which might be funded, the effect of "Grammbo" is going to stop everything. Is that about it?

Herrington. I'm trying not to give a pessimistic view of this project. I think it is a good project. I think the country needs it. The SSC has a lot to offer for this country on technological leadership. There's tremendous interest in it, not only by your state. Every state has come to us. Many states have appropriated money to set up some sort of program on why it should be in their state . . . . The only decision that we have to make now as a country, as a Congress and as an Administration: Can we afford $6 billion plus. I think we are past the stage of saying, "Can we do it?" The technology is there. We know how to do it, and we can easily pick a place to do it. All we need to know is can we afford at this time six-plus billion dollars to build it. Our judgment in the Administration, in submitting this budget, is this is not the year.

Do we soothe everybody's feelings by putting a little bit more money in to continue looking at it? I don't think we can afford it. That's our judgment. But we're ready for a decision. This is a go-forward decision point for this project.

Fawell. What about an international cooperative venture? I agree with you that it's so much money and you have to prioritize and Congress isn't used to sometimes prioritizing. But what about an international cooperative venture here, with Japan, West Germany? This seems to be the wave of the future in these tremendously costly projects . . . and will not Europe move ahead in this area if we don't?

Herrington. Europe . . . has the CERN project . . . and it's been very successful, a good project. Our Department is strongly supportive of international cooperation for these types of projects, because obviously duplication of the effort in several different parts of the world does not benefit anybody, and we have had discussions on international cooperation. We would like very much to see international cooperation on this type of project. That's one way to solve our problem.

Fawell. Is there some significant action taking place in efforts to bring about international cooperation?

Herrington. There are ongoing discussions . . . . The question always comes up, where do you put it? Everybody would like a prestigious project like this. That's one of the issues that has to be hammered out.

Yes or No for Next Budget

Herrington was accompanied to the hearing by Alvin W. Trivelpiece, Director of the DOE Office of Energy Research, which is financing SSC research and trying to hold a lid on the project's turbulent politics. The following is from a a hallway interview SGR held with Trivelpiece immediately following Herrington's testimony:

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SGR. Can you decipher this?

Trivelpiece. There's a process in the works to prepare a decision in time for the [fiscal] '88 budget [which normally would reach near-final form late next fall]. There are several possibilities: No-never; yes for '88 or no for '88 and yes for '89.

SGR. Does this mean there's been a change in the Department's timetable for a decision on the SSC?

Trivelpiece. There is no prior timetable. There is a timetable which the physicists have had. There has never been a timetable which the Department has had. So, the Department has worked this one step at a time. This is one more step. This is not unlike what we did with [then DOE Secretary Donald] Hodel a couple of years ago. In fact, the money was appropriated, and until certain milestones were met, there was no decision to proceed with next year's $20-million increment for studies. So, it did require passing certain internal Department hurdles.

SGR. Will there be another $20 million [for continuing design work] in FY 1987?

Trivelpiece. That's unspecified. It's neither an increase nor a decrease. It is simply unspecified until such

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. . . Gramm-Rudman Hastened Need for SSC Decision

(Continued from page 3)

time as certain internal reviews take place. This was forced on us by the Gramm-Rudman initiative, which took place subsequent to our original budget submission.

SGR. *What does "unspecified" mean? Not known, or you haven't decided yet?*

Trivelpiece. We haven't decided on the exact amount that may or may not be dedicated to the SSC activity. There's no construction line [in the budget]. It has always been simply a budget element in an otherwise larger budget, a $70 million or $80 million item which is for accelerator improvements. There is neither a decision to, or not to.

In the first place, I have to be convinced that there is an adequate body of information to present this to the Secretary. He has to be convinced that this is something worth presenting to the President. [Herrington] said that in the present budget climate it is hard to see a $6 billion item going forward, and that's a statement of truth; it's not a statement of whether or not he likes it or dislikes it. You don't have to be a Secretary to come to that conclusion.

SGR. *What does the $6 billion cover?*

Trivelpiece. That's $3 billion of construction, plus the $1 billion for ancillary apparatus, buildings, detectors, and so on, escalated over a 10-year period, with a 5 or 6 percent assumed inflation factor. It comes out to 6 billion total appropriated dollars.

SGR. *You feel that almost all the information on which to base a decision is in hand?*

Trivelpiece. Pick a number—80 percent of the information, 90 percent. In this business you make decisions without complete information, and that's what we're in the process of doing.

SGR. *At this time last year, were you expecting to make a go or no-go decision during this fiscal year?*

Trivelpiece. My assumption last year was that we would continue for one more year of gathering information and doing magnet research and so on. The Gramm-Rudman circumstances just moved ahead the time at which we have to make decisions.

SGR. *Then, you're being pushed to a decision sooner than you anticipated?*

Trivelpiece. I don't know whether it's sooner than desirable or desired, or whatever. There's always this problem with decision-making. What you don't want to do is ask a question prematurely that you're unprepared to make a complete discussion on, and get "no"—it's very difficult to get such a "no" reversed. If we could have had the additional year to have permitted additional research, we would be that much better prepared, and we might have 98 percent of the information, instead of 90 percent; that would be so much the better. But that's a luxury which the present deficit circumstance doesn't seem to allow us.

SGR. *The possibilities are no-never or yes for '88 or '89.*

Trivelpiece. For some reason that might not be obvious to me now, we could go forward with this entire information and the Secretary would say, "No, not now, not ever"—he's against it. But, clearly, I don't think you would have gathered that from his comments at the hearing. The other [possibility] is, yes in '88. But yes in '88 means that he has to be persuaded and he has to go to the President. This is not something that's going to come out of a cabinet or cabinet council type of meeting. If the President is persuaded, then the first time anyone would know about it would be the presidential budgetary submission at this time next year. That would be a [fiscal] '88 construction start. The first time it could be debated [in Congress] would be the spring of [calendar] '87. And we don't plan to go forward with any kind of a site selection, if we were to proceed, till such time as there have been some Congressional hearings on it. We don't want to cause people to go out in the states and spend large amounts of money preparing proposals if it is not going to go forward.

SGR. *When is the earliest that you could be inviting site proposals?*

Trivelpiece. The absolute earliest would be late summer of 1987.

A New OSTP International Unit

A Committee on International Science, Engineering and Technology, chartered late last year to coordinate the international activities of federal R&D agencies, is getting organized under the mantle of the White House Office of Science and Technology Policy (OSTP).

The new committee was created by George A. Keyworth II shortly before he left the helm of OSTP to into private business. On the organization charts, it's part of the Federal Coordinating Committee for Science, Engineering, and Technology, a sort of subcabinet of R&D agencies chaired by the Director of OSTP.

Keyworth designated his deputy, John P. McTague, to chair the international committee. McTague, now OSTP's Acting Director, is retaining the assignment, and is said to regard the committee as important. Serving with him as the executive committee of the new group are John Moore, NSF Deputy Director, and John D. Negroponte, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs.

Shuttle Loss, SSC Pressing on Science Funding

The following excerpts are from a recent after-dinner talk in Washington by a federal official who is well-placed to know whereof he speaks.

●

If there is to be a problem with dealing with [the science and technology budget], it's going to be even greater when we have to deal with the replacement of the Shuttle orbiter, if there is that decision, as well as all the other expenses that go with along with the long hiatus in the space program. There are no official figures, but NASA is talking about anywhere from up to $2 billion to replace an orbiter, and maybe an additional billion for four and a half years to take care of the costs of salvage, replacing a very expensive satellite that was lost . . . .

[Regarding the SSC], I've never seen such a decision that we may have to face as this. Nobody has ever come up with anything—six billion dollars plus. The only analagous big-ticket item is the space station. The base price of the space station is $8 billion . . . . Why is it easier to get a space station than an SSC? Well, you know, there are all these externalities associated with space. Besides, the chief examiner of the United States budget likes it . . . . He may also like high-energy physics. But $6 billion worth?

Obviously, we can't abandon high-energy physics and turn it over to CERN (European Center for Nuclear Research.) Current policy says that after a report is delivered later this spring to the Secretary [of Energy], he will make up his mind about what to do. And then it will be a presidential-level decision . . . .

Space station is an interesting case. You have to realize that that's only semi-science. It really isn't traded off in a way that an SSC might be, although we've never faced that big a trade-off in the past. It took months to develop the case for or against the space station. The Department of Defense was against it. The National Academy of Sciences and the science community were against it. Most of the industrial community was against it. The National Security Council was for it, and so was the Arms Control and Disarmament Agency—the heavy hitters. But the President was for it.

We've never faced an issue like the SSC. We've always been able to internalize, so to speak, the big-ticket items by saying, well, if we increase 10 percent, we can absorb this. We're able to absorb CEBAF (Continuous Electron Beam Accelerator Facility), at Newport News, Va. But that's only a $220-million item. If we're faced with having to cope with the SSC, we will certainly have to point out the implications and what the options are. The implications of the SSC are doubling [spending on] high-energy physics, and it raises the questions, particularly if we're in a slow or non-growth situation, as to whether we can justify a doubling of high-energy physics.

There are other ways to go, but people are sort of disinclined to look at those other options. One is to collaborate with CERN more. There are some other things that have been talked about—way-out advanced concepts that will push the decision point 10 years down.

If we're going to continue to be in a Gramm-Rudman situation, my guess is we'll probably defer, without prejudice, the matter. We never turn anything down in this town, if we can avoid it. It is a monumental, monumental decision, the likes of which I don't thing we've ever faced in this country in doing science.

In Print: NSF Publications, Federal Laboratory Roster, Etc.

From the National Science Foundation, Division of Science Resources Studies, 1800 G St. NW, Washington, DC 20550:

Science and Technology Data Book (45 pages, no charge), a pocket-size distillation of basic data on federal and industrial R&D spending, manpower, science and engineering enrollments, and international comparisons.

Immigrant Scientists and Engineers: 1982-84 (31 pages, no charge), latest update of NSF series on numbers, nationalities, disciplines, and places of residence and occupations of foreign scientists and engineers in the US.

Women and Minorities in Science and Engineering (182 pages, no charge), third of a biennial series mandated by the Science and Technology Equal Opportunities Act, reports that employment of women and racial minorities in science and engineering has increased sharply since 1976, but they still hold a disproportionately small share of jobs in these professions; contains many tables and analyses of employment patterns and trends.

●

From the National Technical Information Service, 5285 Port Royal Rd., Springfield, Va. 22161; tel. 703/487-4650:

Directory of Federal Laboratory and Technical Resources: 1986-1987, A Guide to Services, Facilities, and Expertise (160 pages, plus extensive indices, $29, plus $3 for shipping), prepared by the Department of Commerce Center for the Utilization of Federal Technology, lists 900 federal laboratories and facilities "which have the equipment and resources to directly assist the academic and business communities . . . . through the

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The Moscow "Spy Dust" Episode Settles Down

The annals of Soviet-American relations have now been enriched by resolution of the "spy dust" escapade, another State Department production in science fiction. In terms of comic denouement, this latest diplomatic drama falls short of the Yellow Rain follies, wherein "poison gas" was finally identified as bee dung naturally falling from the skies of Laos and Cambodia. But that only confirms that in Foggy Bottom, as elsewhere, the muses of creation keep to their own schedule.

Spy dust came to world attention last August when the State Department announced that off and on since the mid-1970s, the Soviets had been sprinkling a mysterious powder around American embassy facilities in Moscow. Not easily detectable by the naked eye, the stuff reportedly glowed under ultra-violet light, thus leaving a telltale trail of the comings and goings of American personnel and their Soviet contacts.

Tracking the other side is, of course, a major sector of the espionage industry. But spy dust was different, the State Department proclaimed. Its major ingredient, nitrophenylpentadienal, or NPPD, is mutagenic. Alarm was understandably expressed by American personnel in Moscow, including parents fearing that the substance might be tracked home to their children. Unlimbering the heavy artillery of diplomatic protest, the State Department announced that it had assailed "the practice in the strongest terms and demanded that it be terminated immediately."

Meanwhile, to assess the actual danger to the 500 Americans stationed in Moscow, studies were commissioned of the health hazards of the substance and the degree of exposure. The results were announced February 14 by the State Department: Tests conducted by the National Institute of Environmental Health Sciences showed that "exposure to NPPD, particularly at the very low levels found in Moscow, does not carry with it any known health risk."

Furthermore, the State Department said, "Test results indicate that [NPPD] has not been used indiscriminately against American personnel but has been employed by Soviet authorities against a specifically targeted, relatively small percentage of official American employees."

The resolution of the spy dust episode came within a year after Professor Matthew Meselson of Harvard and other scientists demolished the long-running US government claim that Soviet-backed forces were using yellowish poison gas in Southeast Asia. Yellow Rain, reported Meselson and company, was nothing but falling bee dung. That seems to have ended the controversy, for after having announced that it possessed evidence tantamount to a "smoking gun" in support of its Yellow Rain contentions, the Reagan Administration has been discreetly silent on this sensitive issue.

Going back a bit in the history of diplomatic science fiction, there's the legendary episode of the microwave beams that the Soviets have directed off and on since 1953 at the US embassy in Moscow. The purpose may have been to activate electronic listening devices hidden in the building, but US officials say they're not certain. In any case, in the mid-1970s the microwave barrage touched off a cancer scare and further acrimonious exchanges between the two countries. Subsequently, controlled health studies of personnel who had served at the embassy revealed no problems attributable to microwaves. In several respects, they were found to be healthier than comparable Foreign Service groups that had not served in Moscow.

A Senate investigation reported in 1979 that the exposure level at the embassy "never exceeded 18 microwatts per square centimeter, which is far below the US voluntary standard for worker exposure (10,000 microwatts or 10 milliwatts per square centimeter.)"

These diplomatic episodes of pseudo-scientific creativity are striking for both their clumsiness and their dedication to keeping the cold war chills flowing, as if there is a danger of the Soviets lulling the American public into thinking they're nice guys.

No chance of that. The real danger in a succession of flops is that the audience is bound to lose faith in the producers.—DSG

In Print

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sharing of expertise, equipment, and facilities, or as a reference for information"; included are name and telephone number of person to contact at each installation, and description of programs and equipment.

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From the Congressional Clearinghouse on the Future, 555 House Annex 2, Washington, DC 20515; tel. 202/226-3434:

What's Next, A Newsletter of Emerging Issues and Trends (8 pages, quarterly, no charge; subscriptions must be arranged through a member of Congress); published by an informal network of members of Congress concerned with scientific and technological developments "that could affect the future."

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From the Gale Research Co., Book Tower, Detroit, Michigan; tel. 313/961-2242:

Pacific Research Centres, A Directory of Organizations in Science, Technology, Agriculture, and Medicine, first edition, (514 pages, $200), describes research centers, their programs, staffs, and funding in Japan, China, Australia, Korea, Singapore, and other Pacific nations; included are names of key personnel, addresses and telephone numbers.

House Science Task Force Sets Hearing Agenda

Now at the two-thirds mark in its two-year study of federal-science relations, the House Science and Technology Committee's Task Force on Science Policy has scheduled a set of hearings that will stretch into the spring. Chairman Don Fuqua (D-Fla.) says a draft report will then be issued, followed by hearings next summer to receive comments from "leaders in American science policy, past and present."

The new lot of hearings, following sessions on 13 separate subjects last year, began February 19 with a brief session on Demographics and Manpower. The sole witness was Eugene Frankel, Project Director for the Office of Technology Assessment's report *Demographic Trends and the Scientific and Engineering Work Force* (SGR Vol. XVI, No. 1).

OTA has concluded that, despite a decline in the college-age population, market forces plus encouragement of minorities and women can supply the nation's sci-tech manpower needs. Fuqua and his colleagues were attentive, but having heard expert warnings of coming manpower shortages, seemed a bit puzzled by Frankel's assurances.

Hearings on Science and the Regulatory Environment began with a 1-hour session on February 26, and will continue on March 5, 6. The rest of the hearing agenda:

Research Funding Mechanisms, March 12, 13, 19, 30
Research Project Selection, April 8, 9, 10
National Research Funding Levels, April 15, 16
The Nobel Prizes and Science Policy, April 17
Policies for Biomedical Research (NIH, VA, FDA), April 22, 23, 24
Research Funding as an Investment, April 29, 30, May 1
The Role of the National Academies, May 6, 7, 8
Science in American Foreign Policy (in collaboration with the House Committee on Foreign Affairs), May 13, 14, 15
Financial Health of the Universities, May 20, 21, 22

To check on schedule changes and for other information: John Holmfeld, 202/225-1062.

Besides Fuqua, the membership consists of:

George E. Brown Jr.(D-Calif.)
Timothy E. Wirth (D-Colo.)
Doug Walgren (D-Pa.)
Harold L.Volkmer (D-Mo.)
Stan Lundine (D-NY)
Norman Y. Mineta (D-Calif.)
Harry M. Reid (D-Nev.)
Frederick C. Boucher (D-Va.)
Richard H. Stallings (D-Idaho)
Manuel Lujan Jr. (R-NM)
Tom Lewis (R-Fla.)
Don Ritter (R-Pa.)
Sid W. Morrison (R-Wash.)
Ron Packard (R-Calif.)
Jan Meyers (R-Kan.)
Harris W. Fawell (R-Ill.)
D. French Slaughter (R-Va.)

In Quotes: Regulating Science

"Should science be controlled through a combination of self-regulation and broad federal oversight, insulated from local laws? The emergence of a number of cases in which research facilities have been the subject of local protests indicates that research no longer wears a mantle of unquestionable civic respectability . . . .

"Given these circumstances, several changes may occur in the near future. One is a shift in who must bear the burden of proof for control of research. That responsibility is increasingly shifting to the regulated researcher, who must prove that the research is safe or anticipate whether the dissemination of the research results may have some adverse effect on the national interest. As this situation changes, the federal government will increasingly have to consider the appropriate role for scientists in the regulatory process itself. How much should be left to informal practice and how much required through legislatively enforceable regulation . . . . ?

"The topic of the regulatory environment for research thus involves discussion of some of the most basic questions of American political philosophy: public control v. self-rule, federal v. local jurisdiction, the feasibility of regulation and the importance of consent by the regulated, government regulation v. individual liberty, and how to balance the conflicting rights and values of different social institutions . . . ."

From ***The Regulatory Environment for Science*** (146 pages, $6), technical memorandum produced by the Office of Technology Assessment at the request of the House Science and Technology Committee's Task Force on Science Policy; GPO Stock No. 052-003-01024-1, available from Superintendent of Documents, USGPO, Washington, DC 20402; tel. 202/783-3238.

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. . . Controls on Open Research Hit by AIP Board

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what deflated by a division of opinion over whether there's sense or fantasy in the Pentagon's contentions that visiting Soviet researchers have surreptitiously used our advanced machines for militarily useful tasks.

The visa system, of course, limits the universities' freedom of invitation. But on the scale of abhorrence, it is considered preferable to the security classifications that the Pentagon would really like to impose on supercomputers and other advanced research facilities in academe. The universities, arguing their case in the DOD-University Forum—a semi-annual bull session between academe and the Pentagon—have arrived at a bedrock position: If the Department of Defense wants security restrictions on government-supported research, it should classify the research, rather than saddle universities with the foggy concept of "unclassified but sensitive." Since few universities accept classified research on campus, the Pentagon has moved warily to get its way without stampeding its touchy academic clients.

In response to concerns that academics have expressed about the possibility of indiscriminate use of visa controls against Soviet scholars, even without computer skills, the Pentagon has suggested another device—restricted visas. Thus, a visa would be stamped to indicate that the visitor may not go here or there. The American Association of Universities, representing many of the big research institutions, is skeptical about the Pentagon's assurance that the task of policing these visas would rest wholly with the government. AAU members have repeatedly said that they don't want to adopt a pass system on their campuses.

While NSF and the Defense Department continue their discussions, a strong expression of concern about any restrictions on unclassified research has been issued by the leadership of the disciplines most affected. In a statement dated February 12, the Governing Board of the American Institute of Physics—representing the 9 leading American societies in physics and astronomy—expressed its opposition to any government control over access to unclassified laboratories.

Stating that it "views with great concern any attempt by the government to restrict access of certain foreign nationals to unclassified research facilities," the AIP Board noted that attention is now focused on supercomputers. But, it continued, "Hundreds of other facilities at US universities and industrial laboratories can and inevitably will be upgraded to the supercomputing level. Existing procedures already protect technical data and other files at computing centers. Further restrictions that limit access to the facility itself are unnecessary and counterproductive."

The AIP statement pointed out that a National Security Decision Directive issued by President Reagan last September states, "No restrictions may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification, except as provided in applicable US statutes."

That final clause allows for just about anything, of course. But even if it hadn't been tacked onto what originally started out as an iron-clad assurance of openness for unclassified research, the Pentagon's hardliners would be undeterred. They're convinced that the Soviets are feasting on open American science, and while they nod politely to the argument that the US is ahead in science because it's open, they bring a gumshoe mentality to the issue. If it's valuable, they argue, it should be locked up.—DSG

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